

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(currently amended) A method for controlling the average weight of each portion of a plurality of portions of material fed to an injection molding system from a feeding system that comprises at least a hopper and a weighing device, said method comprising:

in a first weighing step, weighing said hopper;

after said first weighing step, dispensing a plurality of portions of material, the plurality of portions being constituted by a given number of portions;

in a second weighing step, after said dispensing step, weighing said hopper;

calculating the difference between the weight of said hopper determined in said first weighing step and the weight of said hopper determined in said second weighing step, the difference constituting the loss of weight of said hopper; and

dividing the loss of weight of said hopper by the said given number of said plurality of portions.

2.(original) The method of claim 1, wherein the hopper comprises:

a lower part provided with an outlet having a periphery;

an upper part provided with a fill opening, wherein said upper part has a wall that is located to form an upper boundary of a region enclosed by a vertical projection of said periphery and the entire said fill opening is located above, and is horizontally offset from, said upper boundary of said region.

3. (currently amended) The method of claim-21, wherein the hopper comprises:

a lower part provided with an outlet;

an upper part provided with a fill opening and an inclined wall or an upper boundary, wherein said inclined wall has a portion or said upper boundary has a region that is located above said outlet, and is delimited by a vertical projection of said outlet, and the entire said fill opening is located above said inclined wall portion, and is horizontally offset from said inclined wall portion.

4.(original) The method of claim 3 further comprising:

controlling the delivery of material to said hopper to maintain said hopper filled with material to the level at or above said portion of said inclined wall, thereby causing said hopper to remain filled with material to a level at or above said inclined wall portion as material is being dispensed via said outlet.

5. (original) The method of claim 4, wherein said upper part of said hopper has parallel sidewalls or a cylindrical sidewall.

6. (original) The method of claim 5, wherein said lower part of said hopper has a funnel-shaped part.

7. (currently amended) The method of claim 1, wherein:
said hopper has a lower part provided with an outlet;
said method further comprises disposing said hopper into a container having an outlet that is horizontally offset from, and located below, said outlet of said hopper; and
said step of dispensing is carried out by feeding material from said hopper outlet to said container and then from said container outlet to a feeder that dispenses the plurality of portions of material.

8. (original) The method of claim 1, wherein said step of dispensing is carried out by operating a feeder to dispense successive portions of material from said hopper, wherein each said portion is dispensed in a given time and for a given interval of time, and controlling said feeder to dispense more or less material during subsequent intervals of time depending on whether the calculated portion weight is more or less than a predetermined portion weight.

9. (original) The method of claim 1, wherein said hopper has a lower part provided with an outlet, and further wherein said step of dispensing is carried out by operating a screw feeder that feeds material by rotating at a controlled speed to dispense successive portions of material from said hopper.

10. (currently amended) A method for controlling the average weight of each of portion of a plurality of portions of material fed to an injection molding machine from a feeding system that comprises at least a hopper and a weighing device, said method comprising:

in a first weighing step, weighing said hopper;

after said first weighing step, dispensing a plurality of portions of material, the plurality of portions being constituted by a given number of portions;

in a second weighing step, after said dispensing step, weighing said hopper;

calculating the difference between the weight of said hopper determined in said first weighing step and the weight of said hopper determined in said second weighing step, the difference constituting the loss of weight of said hopper; and

dividing the loss of weight of said hopper by the said given number of said plurality of portions,

wherein said weighing steps are performed with a weighing device and the given number of portions is equal to at least the number calculated by dividing the sensitivity of said weighing device by an estimated or desired weight of each fed portion, and wherein said estimated or desired weight of each fed portion is smaller than said sensitivity.

11. (original) The method of claim 10, wherein the hopper comprises:

a lower part provided with an outlet having a periphery;

an upper part provided with a fill opening, wherein said upper part has a wall that is located to form an upper

boundary of a region enclosed by a vertical projection of said periphery and the entire said fill opening is located above, and is horizontally offset from, said upper boundary of said region.

12. (currently amended) The method of claim ~~11~~10,
wherein the hopper comprises:

a lower part provided with an outlet;
an upper part provided with a fill opening and an inclined wall or an upper boundary, wherein said inclined wall has a portion or said upper boundary has a region that is located above said outlet, and is delimited by a vertical projection of said outlet, and the entire said fill opening is located above said inclined wall portion, and is horizontally offset from said inclined wall portion.

13. (original) The method of claim 12 further comprising:

controlling the delivery of material to said hopper to maintain said hopper filled with material to the level at or above said portion of said inclined wall, thereby causing said hopper to remain filled with material to a level at or above said inclined wall portion as material is being dispensed via said outlet.

14. (original) The method of claim 13, wherein said upper part of said hopper has parallel sidewalls or a cylindrical sidewall.

15. (original) The method of claim 14, wherein said lower part of said hopper has a funnel-shaped part.

16. (currently amended) The method of claim 10, wherein:
said hopper has a lower part provided with an outlet;
said method further comprises disposing said hopper into a container having an outlet that is horizontally offset from, and located below, said outlet of said hopper; and
said step of dispensing is carried out by feeding material from said hopper outlet to said container and then from said container outlet to a feeder that dispenses the plurality of portions of material.

17. (original) The method of claim 10, wherein said step of dispensing is carried out by operating a feeder to dispense successive portions of material from said hopper, wherein each said portion is dispensed in a given time and for a given interval of time, and

controlling said feeder to dispense more or less material during subsequent intervals of time depending on whether the calculated portion weight is more or less than a predetermined portion weight.

18. (original) The method of claim 10 wherein said hopper has a lower part provided with an outlet, and further wherein said step of dispensing is carried out by operating a screw feeder that feeds material by rotating at a controlled speed to dispense successive portions of material from said hopper.

19. (new) The method of claim 1, wherein said calculating step is performed only on the basis of the weights determined in said first and second weighing steps.

20. (new) The method of claim 10, wherein said calculating step is performed only on the basis of the weights determined in said first and second weighing steps.